



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,402	09/09/2005	Friedrich Georg Schmidt	263761US0XPCT	2963
22850 7590 10/07/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER SANDERS, KRIELLION ANTIONETTE				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
10/07/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/519,402

**Applicant(s)**

SCHMIDT ET AL.

**Examiner**

Kriellion A. Sanders

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
4a) Of the above claim(s) 13-27 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SF/88)  
Paper No(s)/Mail Date 1/05, 6/05, 12/06, 8/07  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's election with traverse of Group I, claims 1-12 in the reply filed on 7/03/2008 is acknowledged. The traversal is on the ground(s) that:

There is a technical relationship that links all the Groups (I-VI) and it is this technical relationship that defines the contribution which each of the Groups taken as a whole makes over the prior art. The Examiner asserts that Groups I-VI do not relate to a single general invention concept under PCT Rules 13.1 and 13.2 because they lack the same corresponding technical feature. The Examiner has not considered that the claims in each Group are considered to have related inventions under 37 C.F.R. § 1.475(b) in which the inventions are considered to have unity of invention. Applicants submit that while Rules 13.1 and 13.2 are applicable, 37 C.F.R. § 1.475(b) provides in relevant part that a "national stage application containing claims to different categories of invention as considered to have unity of invention if the claims are drawn to... (3) a product, process specially adapted for the manufacture of said product and the use of said product .... Moreover, Applicants respectfully submit that a search of all the claims would not impose a serious burden on the Office. As the Office has not shown any evidence that a restriction should now be required when the International Preliminary Examination Report did not, restriction is now believed to be improper.

This is not found persuasive because the inventions of the various groups do not relate to a single inventive concept, but relate to a plurality of inventive concepts including a polymer

composition, a process for preparing a polymer composition, a hot melt adhesive, a process for using a hot melt adhesive, a binder and a sports product. These inventive concepts are patentably distinct and place an undue burden of search and consideration on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 0144363 in view of the literature reference to Scott et al. or Sugiura et al., US patent No 4,943,380..

The World patent discloses high performance thermoplastic polymer comprising a thermoplastic resin composition comprising a mixture, based on the total weight of the composition, of:

(A) about 88 wt% to about 99 wt% of thermoplastic polymer resin; and,

(B) about 1 wt% to about 12 wt% of an additive selected from the group consisting of phosphordum sulfonate, anhydride, and mixtures thereof, wherein the thermoplastic resin is selected from the group consisting of polycarbonates, polyimides, amorphous polyamides, polyamideimides, polysulfones, polyethersulfones, polyarylsulfones, poly ketones, polyphenylsulfones, polyetherimides, polyetherketones, polyphenylene sulfoxide and

combinations thereof and an anhydride or a phosphonium sulfonate. The phosphonium sulfonates correspond to the sulfonates of applicant's claims.

Other additives such as fillers and reinforcing agents, mold release agents, UV absorbers, stabilizers, light stabilizers, lubricants, plasticizers, pigments, dyes, colorants, anti-static agents, blowing agents, flame retardants, impact modifiers, and combinations thereof may optionally be employed in the patented compositions. See claims 1-5 and page 15, paragraph 1.

Scott et al discloses that ideally, plasticizers exhibit most of the following characteristics: low volatility, low-leachability, high and low temperature: stability, thermodynamic compatibility with polymer, low cost and minimal health and safety concerns and that most plasticizers are based on three classes of compounds: phthalates, adipates, and trimellitates, with dioctyl phthalate (DOP) accounting for greater than 50% of all plasticizer used.

Scott et al indicates that ionic liquids (ILs) impart low temperature stability to polymers and may be used in amounts ranging from 1-50%. Scott et al. further states that ionic liquids containing imidazolium or pyridinium cations are conventional plasticizers for polymers and that ILs exhibit many of these characteristics, with performance, reproducibility, and wide thermal range being some of the greatest advantages over traditional plasticizing agents.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the ILs of Scott et al having the imidazolium or pyridinium cations into the resin blends of the world patent as those plasticizers generically disclosed therein with the expectation of achieving an improvement in volatility; leach-ability, high and low temperature stability, thermodynamic compatibility with polymers, low cost and health and safety concerns.

Sugiura et al. further documents that the phosphonium sulfonates of the World patent provide heat resistance to polymer compositions. See col. 2, line 20 through col. 3, line 27.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders  
Primary Examiner  
Art Unit 1796